WILDLIFE HABITAT EVALUATION

BACKGROUND:

Natural Resources Conservation Service policy for assistance on private lands has, since its inception, required that conservation practice installation be accomplished with consideration for wildlife and wildlife habitat.

Application of conservation practices is generally considered to be beneficial for wildlife. Practices such as field borders, filter strips, grassed waterways, proper grazing management, and conservation tillage generally increase food, water, or cover and improve diversity for most wildlife species.

Practices such as brush management, drainage, timber stand improvement and pasture planting can reduce needed food and cover when applied without wildlife consideration. The effect of conservation practice installation on wildlife largely depends on practice selection, design, and plant species used.

It is not the responsibility of the Natural Resources Conservation Service to determine the extent to which landowners may or should consider wildlife needs in their operation. Neither does the NRCS determine which particular wildlife species should be managed. These decisions are made by the landowner based on economics, legal constraints, local conditions, and landowner objectives.

NRCS personnel have a responsibility and obligation to determine and explain to the decisionmaker what effect a planned system of conservation practices will have on wildlife resources of the particular land unit. Decisionmakers must be provided with this information in order to make intelligent and informed decisions about their property. The NRCS must have this information to assess the impact of practice installation and determine if service policy requiring consideration of wildlife is being properly followed. In the past, conservation practices were often designed and installed with little thought or study given to their effects on wildlife, unless the landowner indicated a specific wildlife interest.

Adoption of the total resource management policy (SWAPA) in conservation planning provides that emphasis be directed to plants, air, and animals in addition to soil and water. It requires that quality criteria be established for each of the five resources. Resource management systems consisting of various conservation practices are measured against these quality criteria to determine if acceptable levels of conservation are being met. **A national quality criterion for wildlife habitat has been set at 0.5 or 5O% of potential to meet the resource management system requirement, existing or planned, regardless of the landuse. For a wildlife land RMS, a score of .75 or 75% is required.**

In order to measure the degree to which the resource management systems meet the quality criteria, a method of evaluation is required. A subjective evaluation based on the planner's knowledge is the simplest form. However, this method is dependent on the interest, ability, and knowledge of the planner. This method has been widely used in the past and its success or failure has been dependent upon the wildlife training provided to planners and the technical support provided by biologists. Unfortunately, the quality and amount of wildlife management training and technical assistance provided to field office personnel since 1985 has been minimal due to other workload requirements.

The attached habitat evaluation procedure is designed for use when planning a resource management system where wildlife is not the primary objective or intensive management for a species is not desired. This evaluation procedure is based primarily on diversity to give a general rating applicable to many different species.

INTRODUCTION:

The following evaluation is designed for use by employees who provide assistance in farm planning and who have limited training and knowledge in wildlife management. It is intended to assist decisionmakers in understanding the effects of various agricultural practices on wildlife and to provide documentation of the effects of Resource Management System implementation on wildlife resources.

This habitat evaluation is simplified to limit data input and the time required to complete it. It cannot be used to make detailed management recommendations required for intensive management. If the primary objective for a field or planning unit is wildlife, or it is to be intensively managed, a species based wildlife habitat appraisal procedure should be used, and the NRCS biologist or South Carolina Department of Natural Resources biologist contacted.

PROCEDURE:

(1) Identify all crop, forest, old field, pasture, and wetland areas on the tract or farm. Fields should include borders around them such as woody fence rows that divide crop fields. Hayland should be included with pasture. If a particular type of landuse does not seem to fit any of the types listed, contact the state biologist.

(2) If the tract has only one field in a habitat type, or all fields within a habitat type are similar, only one field needs to be evaluated. If the tract has fields that vary in habitat quality within a habitat type, all fields should be inventoried and a weighted average score computed. If there are significant differences in the same field, the field may be divided and more than one evaluation done. For example, if one forest field had a pine plantation on part and an old mixed pine hardwood stand on the remainder, the two areas should be evaluated separately if more than one of these variations occurs on the farm, use the weighted average score for the landuse.

(3) Complete the worksheet inventory forms (see attachments) for the appropriate field(s) and compute the score for each habitat type. This evaluation will provide information on the quality of habitat for the EXISTING CONDITION. Observing what features receive a low score will help the planner determine what could be done to improve the habitat.

(4) Repeat the evaluation for each of the Resource Management Systems being considered and determine the effects of each of the PLANNED alternatives on the wildlife resource. If the score for any existing habitat type is low, practices should be chosen which will improve habitat quality.

(5) Complete the summary sheet to determine if the selected alternative meets the quality criteria for a Resource Management System and is acceptable to the decisionmaker.

Quality Criteria: In order to meet the FOTG Quality Criteria for wild animal habitat, the Habitat Type Index for each land use must have an index greater than 0.5. In general, a habitat index below 0.25 indicates poor habitat, between 0.25 and 0.5 is fair habitat, 0.5 to 0.75 is good and above 0.75 would be excellent habitat.

HABITAT TYPE INDEX (HTI)
WORKSHEET
FOR
CROPLAND HABITAT

Participant_____ Tract No. _____
Date _____ Field No. _____
Observer _____ Acres _____

Note: This form may be used for all fields that are planned and managed alike.

CROPLAND HABITAT INDEX	**POINTS**	**EXIST**	**PLAN**
Crop Residue Management		_____	_____
(>75% acreage)			
Continuous no-till (long term)	15		
No-till farming, 3 out of 5 years	12		
No fall tillage only	8		
Conventional and fall tillage	1		
***Add 2 bonus points,** if cover crops are no-till drilled with 60% residue left on the surface**.**			
Crop Species		_____	_____
(>50% acreage & years)			
Corn, soybeans, sorghum, millets, and/or small grains	10		
All else	1		
Distance to forest (>10 ac.) or woody cover (>25 ft. wide) connecting to forest (>10 acres).		_____	_____
>75% of field within 330 ft.	15		
50 – 75% of field within 330 ft.	10		
25 – 50% of field within 330 ft.	5		
<25% of field within 330 ft	1		
***Distance to native herbaceous or NWSG strips (>25 ft. wide) within field,* such as filter strips, waterways, diversions.**		_____	_____
>75% of field within 330 ft.	10		
50 – 75 % of field within 330 ft.	7		
25 – 50 % of field within 330 ft.	4		
<25% of field within 330 ft	1		
Percent of Field Perimeter With a Field Border		_____	_____
For each 10% of field perimeter with a width of:			
>25 ft. native herbaceous vegetation.	**Add 5 points/10%**.		
> 10 ft. native herbaceous vegetation.	**Add 3 points/10%.**		
>10 ft. mixture of introduced, and native herbaceous vegetation,	**Add 1 point/10%.**		
(A) Total Cropland Habitat Points (100 maximum)		_____	_____
(B) Cropland Habitat Index (Total points/100)		_____	_____

HABITAT TYPE INDEX (HTI)
WORKSHEET
FOR
OLD FIELD HABITAT
(2 acres or more)

Participant_____ Tract No. _____
Date _____ Field No. _____
Observer _____ Acres _____

Note: This form may be used for all fields that are planned and managed alike.

OLD FIELD HABITAT INDEX	**POINTS**	**EXIST.**	**PLAN**
Species Composition		_____	_____
Many species of grass, legumes, forbs (>4)	10		
Stand dominated by a few species (2-4)	5		
Stand dominated by a single species (>75%)	1		
Manipulation (Burning, disking)		_____	_____
3 year rotation	25		
2 year rotation	15		
Mowing (2-3 year rotation)	10		
Annual or > 3 years rotation	1		
Distance to woody cover (>25 ft. wide) connecting to forest at least 10 acres in size.		_____	_____
>75% of field within 330 ft.	15		
50 – 75 % of field within 330 ft.	10		
25 – 50 % of field within 330 ft.	5		
<25% of field within 330 ft	1		
Percent of Field in early successional herbaceous vegetation (1 to 3 yrs. Old)		_____	_____
For each 10% of field: add 5 points. (**Max. 50 points**)			
(A) Total Old Field Habitat Points (100 maximum)		_____	_____
(B) Old Field Habitat Index (Total points/100)		_____	_____

HABITAT TYPE INDEX (HTI)
WORKSHEET
FOR
PASTURELAND/HAYLAND HABITAT

Participant _____ Tract No. _____
Date _____ Field No. _____
Observer _____ Acres _____

Note: This form may be used for all fields that are planned and managed alike.

PASTURELAND HABITAT INDEX	POINTS	EXIST	PLAN
Composition		_____	_____
(>50% acreage)			
Native warm season mixture (>2) with forbs	25		
Single native grass-legume mixture	9		
Introduced and native grass (>50%) mix	8		
Single legume	7		
Single native warm season grass seeded Or managed at forage rates.	6		
Introduced grass with clover	5		
Bermudagrass with small grain	4		
Bahiagrass	3		
Fescue or bermudagrass	1		
Prescribed Grazing Plan (528A) or Forage Management (511)		_____	_____
With native grass or legume in mix	10		
Without native grass or legume in mix	3		
Corridor management			
Distance to ungrazed woody cover (>25 ft. wide) connecting to forest at least 10 acres in size.		_____	_____
>75% of field within 330 ft.	25		
50 – 75 % of field within 330 ft.	15		
25 – 50 % of field within 330 ft.	10		
<25% of field within 330 ft	1		
Distance to ungrazed native herbaceous or NWSG areas (>25 ft. wide) Such as field border or odd corners, etc.		_____	_____
>75% of field within 330 ft.	25		
50 – 75 % of field within 330 ft.	15		
25 – 50 % of field within 330 ft.	10		
<25% of field within 330 ft	1		
Fence rows, cross fencing (>50%)		_____	_____
with ungrazed woody cover (>10 ft. wide)	15		
with grazed woody cover (>10 ft. wide)	5		
(A) Total Pastureland/hayland Habitat Points (100 maximum)		_____	_____
(B) Pastureland/hayland Habitat Index (Total points/100)		_____	_____

HABITAT TYPE INDEX (HTI)
WORKSHEET
FOR
PINE FOREST HABITAT
(Predominantly Pine)

Participant_____ Tract No. _____
Date _____ Field No. _____
Observer _____ Acres _____

Note: This form may be used for all pine forests that are planned and managed alike.

PINE FOREST HABITAT INDEX	**POINTS**	**EXIST**	**PLAN**
Mature Pine Stand Density, Basal Area		_____	_____
<60 square ft/ac	25		
60-80 square ft/ac	10		
>80 square ft/ac	1		
OR if no overstory: Site (Clearcut area or pastureland conversions)			
Pine, other than longleaf, regeneration			
<300 trees per acre	25		
300-500 trees per acre	10		
>500 trees per acre, <50 trees per acre	1		
OR if the site is within longleaf pine range:			
Longleaf Pine Restoration (300-500 trees per acre)			
Ex: 435 trees per acre (10 x 10 spacing) maximum			
302 trees per acre (12 x 12 spacing) minimum			
Must contain a prescribed burning plan	25		
Must be Historical Longleaf Pine site			
Prescribed Burning		_____	_____
2-3 year frequency	30		
Every year	10		
>3 year frequency	1		
Distance to native herbaceous cover (> 40 'wide,>1/2 acre in size)		_____	_____
>75% of stand within 330 ft.	25		
50 – 75 % of field within 330 ft.	15		
25 – 50 % of field within 330 ft.	10		
<25% of stand within 330 ft	1		
Composition, >5% of stand (Max. 20 points)		_____	_____
Mast producing oaks (>10" DBH) present Or seedlings planted	10		
Soft mast producers present or planted such as persimmon, blackberry, sumac, elderberry, black cherry	10		
(A) Total Pine Forest Habitat Points (100 maximum)		_____	_____
(B) Pine Forest Habitat Index (Total points/100)		_____	_____

HABITAT TYPE INDEX (HTI)
WORKSHEET
FOR
HARDWOOD FOREST HABITAT
(Predominantly Hardwood)

Participant_____ Tract No. _____
Date _____ Field No. _____
Observer _____ Acres _____

Note: This form may be used for all hardwood forests that are planned and managed alike.

EXISTING CONDITION (CIRCLE APPROPRIATE SCORE VALUE)				
TREE SIZE		**NUMBER OF HARDWOOD SPECIES**		
TREE CLASS	**SIZE**	**1**	**2 TO 5**	**> 5**
Seedlings	< 3 ‘ tall	1 point	10 points	15 points
Saplings	> 3 ‘ tall, < 3” DBH	1 point	15 points	20 points
Poles	3 – 10 “ DBH	2 points	20 points	25 points
Sawtimber	> 10 “ DBH	10 points	25 points	30 points
No. of cavity trees or dead snags (>10”) *present*, regardless of number of species		2 points	5 points	10 points

PLANNED CONDITION (CIRCLE APPROPRIATE SCORE VALUE)				
TREE SIZE		**NUMBER OF HARDWOOD SPECIES**		
TREE CLASS	**SIZE**	**1**	**2 TO 5**	**> 5**
Seedlings	< 3 ‘ tall	1 point	10 points	15 points
Saplings	> 3 ‘ tall, < 3” DBH	1 point	15 points	20 points
Poles	3 – 10 “ DBH	2 points	20 points	25 points
Sawtimber	> 10 “ DBH	10 points	25 points	30 points
No. of cavity trees or dead snags (>10”) *planned* regardless of number of species		2 points	5 points	10 points

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HARDWOOD FOREST HABITAT INDEX	**POINTS**	**EXIST**	**PLAN**
(A) Total Hardwood Forest Habitat Points (100 maximum)		_____	_____
(B) Hardwood Forest Habitat Index (Total points/100)		_____	_____

HABITAT TYPE INDEX (HTI)
WORKSHEET
FOR
RIPARIAN HABITAT

Participant_____ Tract No. _____
Date _____ Field No. _____
Observer _____ Acres _____

Note: This form may be used for riparian areas adjacent to streams, ponds, and/or wetlands.

RIPARIAN HABITAT INDEX	***POINTS***	***EXIST.***	***PLAN***
Species Composition (>50 % of the area)		_____	_____
Mixed hardwood	25		
Mixed Pine-Hardwood	20		
Native shrubs and/or herbaceous vegetation	15		
Pine trees	1		
Width of Riparian Area (>50 % of the area)		_____	_____
>100 feet	25		
51-99 feet	20		
35-50 feet	15		
15-49 feet	10		
<15 feet	1		
Grazed or ungrazed (>50 % of the area)		_____	_____
Ungrazed	25		
Grazed	5		
Tree canopy cover		_____	_____
. >75 percent canopy cover	25		
50-74 percent canopy cover	20		
25-49 percent canopy cover	15		
<25 percent canopy cover	1		
(A) Total Riparian Habitat Index Points (100 maximum)		_____	_____
(B) Riparian Habitat Index (Total points/100)		_____	_____

WILDLIFE HABITAT EVALUATION SUMMARY
CALCULATION SHEET
EXISTING CONDITION

HABITAT TYPE	FIELD NO.	HABITAT INDEX		ACRES		WEIGHTED INDEX	HABITAT TYPE INDEX
_________	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
		TOTAL		______		________	

Total Wt. Index / Total acres = ________

HABITAT TYPE	FIELD NO.	HABITAT INDEX		ACRES		WEIGHTED INDEX	HABITAT TYPE INDEX
_________	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
		TOTAL		______		________	

Total Wt. Index / Total acres = ________

HABITAT TYPE	FIELD NO.	HABITAT INDEX		ACRES		WEIGHTED INDEX	HABITAT TYPE INDEX
_________	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
		TOTAL		______		________	

Total Wt. Index / Total acres = ________

HABITAT TYPE	FIELD NO.	HABITAT INDEX		ACRES		WEIGHTED INDEX	HABITAT TYPE INDEX
_________	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
		TOTAL		______		________	

Total Wt. Index / Total acres = ________

WILDLIFE HABITAT EVALUATION SUMMARY
CALCULATION SHEET
PLANNED CONDITION

HABITAT TYPE	FIELD NO.	HABITAT INDEX		ACRES		WEIGHTED INDEX	HABITAT TYPE INDEX
_________	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
		TOTAL		______		________	

Total Wt. Index / Total acres = ________

HABITAT TYPE	FIELD NO.	HABITAT INDEX		ACRES		WEIGHTED INDEX	HABITAT TYPE INDEX
_________	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
		TOTAL		______		________	

Total Wt. Index / Total acres = ________

HABITAT TYPE	FIELD NO.	HABITAT INDEX		ACRES		WEIGHTED INDEX	HABITAT TYPE INDEX
_________	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
		TOTAL		______		________	

Total Wt. Index / Total acres = ________

HABITAT TYPE	FIELD NO.	HABITAT INDEX		ACRES		WEIGHTED INDEX	HABITAT TYPE INDEX
_________	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
	_____	______	X	______	=	________	
		TOTAL		______		________	

Total Wt. Index / Total acres = ________

HABITAT TYPE INDEX (HTI)
SUMMARY

The tract or farm habitat index is calculated by taking the sum of the weighted habitat indexes divided by the total acres in the planning area.

EXISTING CONDITION

HABITAT TYPE	HABITAT INDEX		ACRES		WEIGHTED INDEX	FARM/TRACT INDEX
Cropland	_____	X	_____	=	_____	
Old Field Habitat	_____	X	_____	=	_____	
Pastureland/Hayland	_____	X	_____	=	_____	
Pine Forest	_____	X	_____	=	_____	
Hardwood Forest	_____	X	_____	=	_____	
Riparian Habitat	_____	X	_____	=	_____	
	TOTAL		_____		_____	

Total Wt. Index / Total acres = _____

PLANNED CONDITION

HABITAT TYPE	HABITAT INDEX		ACRES		WEIGHTED INDEX	FARM/TRACT INDEX
Cropland	_____	X	_____	=	_____	
Old Field Habitat	_____	X	_____	=	_____	
Pastureland/Hayland	_____	X	_____	=	_____	
Pine Forest	_____	X	_____	=	_____	
Hardwood Forest	_____	X	_____	=	_____	
Riparian Habitat	_____	X	_____	=	_____	
	TOTAL		_____		_____	

Total Wt. Index / Total acres = _____

**Total Weighted Index of Planned Condition must be 0.5 or greater to meet RMS Quality Criteria.*

****For use with cost-share programs that require a NET Increase in HTI****

HABITAT TYPE INDEX (HTI)
NET EFFECT OF PLAN

(Planned Farm/Tract Index - Existing Farm/Tract Index) = Net Effect of Plan

_____ - _____ = _____